

Sigl et al.

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In the Claims

1-3. (Cancelled)

4. (Currently Amended) A heat sink comprising:

a base having a first side and a second side;

a plurality of fins extending from the first side of the base and including a first fin, a number of intermediate fins, and a last fin;

a groove formed in the first and the last fin and constructed to engage a retainer therein, each groove offset from the base a distance of at least a thickness of the base; and

a U-shaped cavity formed between adjacent fins of the number of intermediate fins and a non-U-shaped cavity formed between the first fin and a neighboring fin and another non-U-shaped cavity formed between the last fin and a neighboring fin; and

the retainer constructed to removably engage the groove to maintain a contact between the second side of the heat sink and a heat generating component when the heat sink is engaged with the retainer.

5. (Previously Presented) The heat sink of claim 4 wherein each of the first fin and the last fin further comprises a common section adjacent the base and a divergent section at a distal end of each of the first fin and the last fin, each distal end having a pair of fins and wherein the groove is formed proximate an interface of the common section and the divergent section.

6. (Cancelled)

7. (Previously Presented) The heat sink of claim 4 wherein the groove in the first fin is generally coplanar with the groove formed in the second fin.

8. (Previously Presented) The heat sink of claim 4 wherein the first fin and the last fin extend a distance from the base and the number of intermediate fins extend approximately twice the distance from the base.

9. (Previously Presented) The heat sink of claim 4 wherein the plurality of fins extend a distance from the base longer than a distance between the first and the last fins.

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10. (Previously Presented) The heat sink of claim 4 formed of extruded aluminum.
11. (Previously Presented) The heat sink of claim 4 wherein the plurality of fins are generally perpendicular to the base.
12. (Currently Amended) A heat sink comprising:
 - a base having a generally planar side constructed to engage an electrical component to be cooled and another side generally opposite thereto, a first end, a second end, and a thickness;
 - a pair of external portions extending generally transverse to the base from the another side, each of the pair of external portions extending a length greater than the thickness of the base above the base from the first and second ends of the base; ~~and~~
 - a plurality of fins extending from the another side of the base between the pair of external portions; and extending a length greater than the length of the external portions; and
 - a retainer constructed to removeably and snap-fittingly engage an end of each of the pair of external portions of the heat sink and retain the generally planar side of the base in thermal communication with the electrical component to be cooled when engaged therewith.
13. (Previously Presented) The heat sink of claim 12 wherein the length of the external portions is approximately half the length of the plurality of fins.
14. (Cancelled)
15. (Cancelled)
16. (Previously Presented) The heat sink of claim 12 formed of extruded aluminum.
17. (Previously Presented) The heat sink of claim 12 wherein the plurality of fins are generally perpendicular to the base and generally parallel to the external portions.
18. (Previously Presented) The heat sink of claim 12 wherein the external portions are generally thicker than the plurality of fins.

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19. (Currently Amended) A heat sink assembly comprising:
a heat sink having a base with a pair of generally parallel sides and a first end fin and a second end fin, each of the first end fin and the second end fin extending from the base and separated from a neighboring fin by a width that is generally fixed along a length of each of the first end fin and the second end fin; ~~and~~
a plurality of intermediate fins extending from the base between the first and second end fins beyond the first end fin and the second end fin; and
a retainer removably engageable to the heat sink by hand, the heat sink being tool free and hardware free, engaged and removed from engagement, with the retainer.

20. (Previously Presented) The assembly of claim 19 further comprising a heat generating device in thermal contact with the base.

21. (Previously Presented) The assembly of claim 19 wherein the plurality of fins are generally perpendicular to a section of the base between the pair of generally parallel sides.

22. (Previously Presented) The assembly of claim 19 wherein the heat sink is extruded aluminum.

23. (Original) The assembly of claim 19 wherein the first end fin and the second end fin each have a groove formed therein.

24. (Previously Presented) The assembly of claim 19 wherein the plurality of intermediate fins are thinner than the first and second end fins.

25. (Cancelled)